EBASCO

March 19 1993
RFEV21 EDEN EGRF M 241

Mr Tye DeMass
EG&G Rocky Flats Inc
P O Box 464 Bldg O80
Golden Colorado 80402 0464

Subject Transmittal of OU1 HHRA March 15 1993 Meeting Notes
BA71785PB

Dear Mr DeMass

Attached are meeting notes taken by Fred Duncan of Dames & Moore at the above referenced meeting between DOE EG&G EPA and, CDH These are transmitted to you as you requested of Mr Duncan They reflect discussion of issues at the meeting as they could impact the revision of the OU1 PHE by Dames & Moore

If you have any questions or require clarification of any issues please contact me at 980 3665 or Mr Duncan directly at 299 7835

Sincerely
EBASCO SERVICES INCORPORATED

Mark Griswold P G
Deputy Program Manager

MG/llh

Attachments

cc C Gee/EG&G
T Abbott
R Lubinski
F Duncan/D&M w/o attachments
DCC RFEV
Chron RFEV

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DRAFT

OU1 HUMAN HEALTH RISK ASSESSMENT (HHRA)
Meeting Notes, 3/15/93, 12 30 4 15 p m Location Interlocken

Present Please see attached roster

Discussion This meeting for the OU1 HHRA was held to discuss comment resolution on the key issues listed on the attached agenda The following items were discussed

- The ingestion of ground water will be included by calculating risk for two additional cases of the five scenarios presented in the October 1992 Draft PHE This entails adding new COCs identified by the screening process and including additional pathways for ingestion of ground water inhalation of volatiles released during indoor water use and dermal absorption of ground water One case will assume unlimited supply of contaminated ground water the other case will use a sum of the estimated available water plus uncontaminated water from public supply systems Language noting that ingestion of ground water has been included solely for regulatory consideration will be included

- Data quality issues will be addressed by adding a tabular comparison of the different data sets including a discussion of limitations (e g media interferences lab contamination and validation) These tables should include the contaminant SQL CRQL detection frequency range average and 95 percent UCL The data that will be used in the report is the validated interim data and the original two quarters of Phase III plus an additional quarter

- COC screening was discussed by comparing the existing method and suggestions made by Bonnie Lavelle (attached) It was suggested that the essential nutrient step be footnoted in tables to explain the rational for each item eliminated Potential definitions for hot spots were suggested involving considerations of relative magnitude PRGs and spatial distribution Since the entire screening process is designed to identify contaminants responsible for 99 percent of the risk the use of separate information about hot spots that do not contribute significantly to risk was discussed Class A carcinogens do not need to be automatically included as COCs, but the screening tables need to clearly identify them and provide pertinent screening information in footnotes Background comparison statistics were discussed as well as potential use of upper tolerance limits in the new Background Geochemistry Report The screening tables similar to those in the Contaminant Identification Tech Memo need to be brought into the HHRA and clarified

Due to time constraints further discussion of the screening process was postponed until the next meeting

Action Summary Weston will provide table shells for the data quality comparison Dames & Moore will provide table shells for the COC screening process The next meeting is scheduled for March 26 1993 (Friday) at Interlocken from 8 30 a m to 12 30 p m

OU-1 [illegible]
Analysis Issues 3/15/95

NAME	ORGANIZATION	Phone
Paul Singh	DOE/RFO	966-4651
Dennis Switch	FG&G	966 8636
Bonnie Lavelle	EPA	294-1067
Richard Grandchamp	SRC	295-1101
Gary Kleeman	EPA	294-1071
Mike Anderson	Weston	980-6800
Fred Duncan	Dames & Moore	299-7835
Cindy Gee	EG&G	966 8650
Dave Niedzwecki	CDH	692-2651
Jill Johnson	CDH	692 2636
Rick Roberts	EGRG	966-8508
Bruce Thatcher	DOE/RFO	966-7532
Tye [illegible]	EG&G	966-8710

ATTENDANCE LIST
OU 1 PHASE III COMMENTS MEETING --93

NAME	ORGANIZATION	PHONE
Tye De Mass	EG&G	X8760
Paul Singh	DOE/RFO	X4651
Dennis Smith	EG&G	X8636
Cindy Gee	EG&G	X8550
Gary Kleeman	EPA	294 1071
Amy Johnson	CDH	692 2636
Mike Anderson	Weston	980 6800
Bonnie Lavelle	EPA	294-1067
Richard Derandehamp	PRC	295 1101
Fred Duncan	Dames & Moore	299 7835
Diane Niedzwiecki	CDH	692 2651
Rick Roberts	EG&G	X8508
Bruce Thatcher	DOE/RFO	X3525

March 15 1993

Aggregation of Major Human Health Risk Assessment Issues

These are major production controlling issues DOE cannot proceed to completion without resolution

1) Ingestion of groundwater at IHSS 119 1

   Revised Comps/TM No 10

2) Data quality and usability assessment for Phase I II Interim III data sets

   Intent of Usability Statements

   - Data Sets Phase I II Interim III
   - Applicablity of Guidance
     - o Validation
     - o PARRC
     - o Other
   - Practicability of Guidance
   - 5 % Subset

3) COC selection methodology

   Flow/Process Joint Effort With Much Discussion Issues Seem to Be "Within the Process Not the Flow Chart Itself

   Statistical Tests

   Background Comparisons

   Toxicity Screen

   Hot Spots (Spatial Concentration Issues Recommend (1) Spatial, (2) Acute Toxicity Risk Screening (Compliments CDH concerns WRT Acute TOX)

   Media for COC Selection (GW S-SOIL, Sub Surf Soil etc)

   Sub-Surf Soil IHSS borings All Borings? Aggregated or Separate?

   Depth 0 to 6 feet?

4) Baseline Conditions (esp the French Drain & Extraction Well) Re Resolution on 10 Mar 92 FD & Extraction Well Exist

5) Format and Presentation

TMs in appendicies/Don t Want to Go Back For the Story

HHBRA may triple in size w/ exhaustive restatement of things already assessed

TM s are very expensive ($200 000)

Maps Tables from the RI/Agencies want the RI summarized at opening of the HHBRA

Need to Get Presentation Slides from Jan Agency Presentation

6) Utilization and Presentation of Uncertainty Analysis

EPA/CDH/DOE emphasis during Risk Communication Seminar (Aug 91)

IAG Section VII D 1 d Risk Characterization

Slope Factors Applicability, Where Presented

7) Exposure Point Computations (RAGS/OSWER/Associated Limitations)

Best statistical evaluation

May 92 OSWER

May 92 Agency Wide

8) Other Method Issues Such As

Dermal contact/matrix and bioavailability/
Inhalation rates
Micrometerology
Acute or short term impacts

9) Risk Characterization (absolute, incremental, comparative uncertainty)

10) Subsurface VOCs and Exposure Assessment

RI indicates main occurence of Contams @ GW not soils

Drives reevaluation of the basement model

Additional Modeling Expands Uncertainty Confidence Interval

DRAFT

Revised

Groundwater Risks
Inhalation, Ingestion, & Dermal
119 1 Only

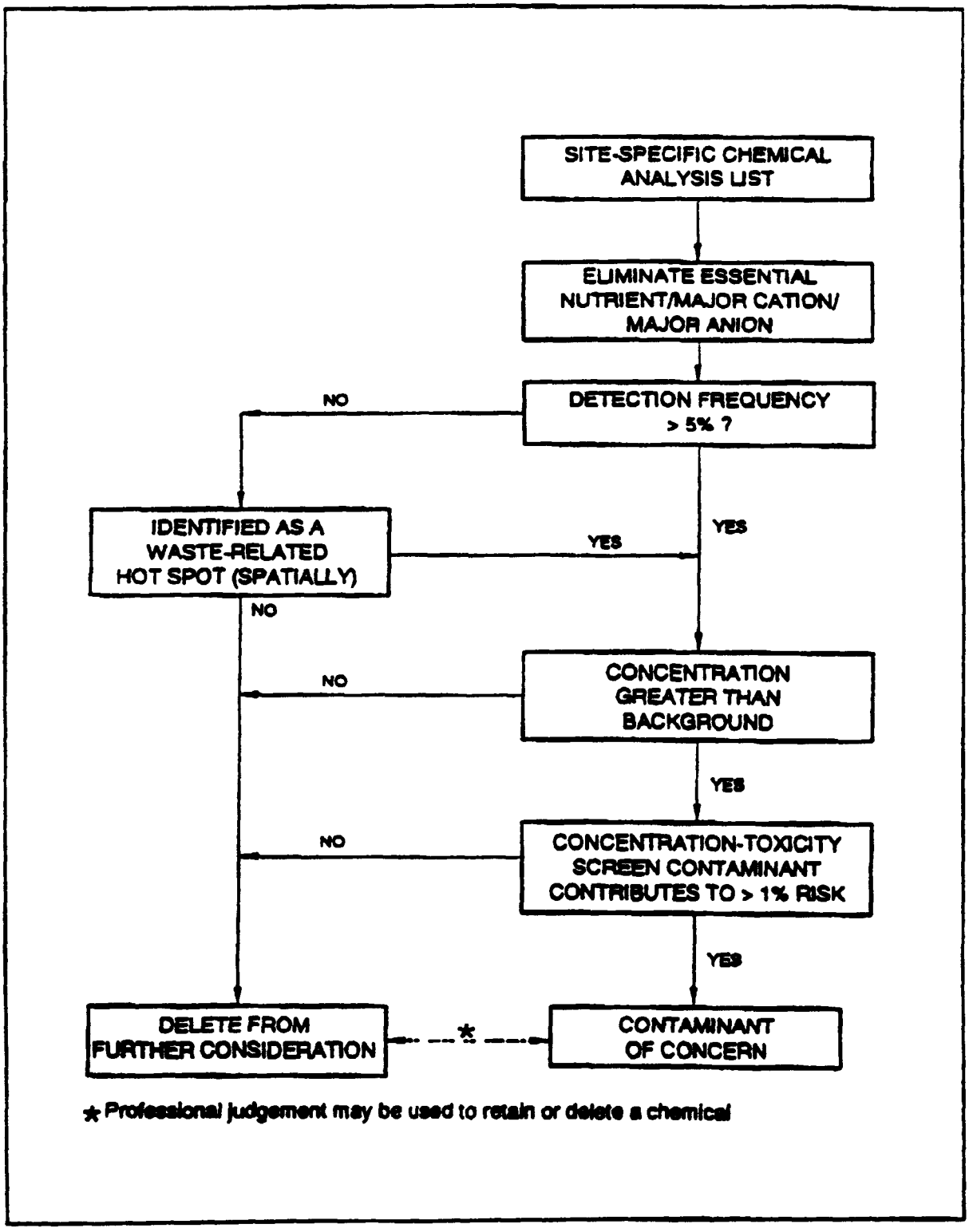
Compound	Case A (IHL) Oct 28 Draft	Case B (I I D) CDH"	Case C (I I D) "Alt /10"
1 1 DCE	2E-3	6E-2	8E-3
CCL4	4E-4	6E-3	9E-4
PERC	4E-6	4E-3	1E-4
TCE	8E-5	3E-3	4E-4
		HI's	HI's
Antimony		3E+3	3E+2
Cr VI		7E+1	7
Mn		3E+2	4E+1
Ni		2E+1	2
No2/No3		8E+3	9E+2
U 233/234		3E-6	< 1E-6
U 238		3E-6	< 1E-6

Case A Oct 28 Draft

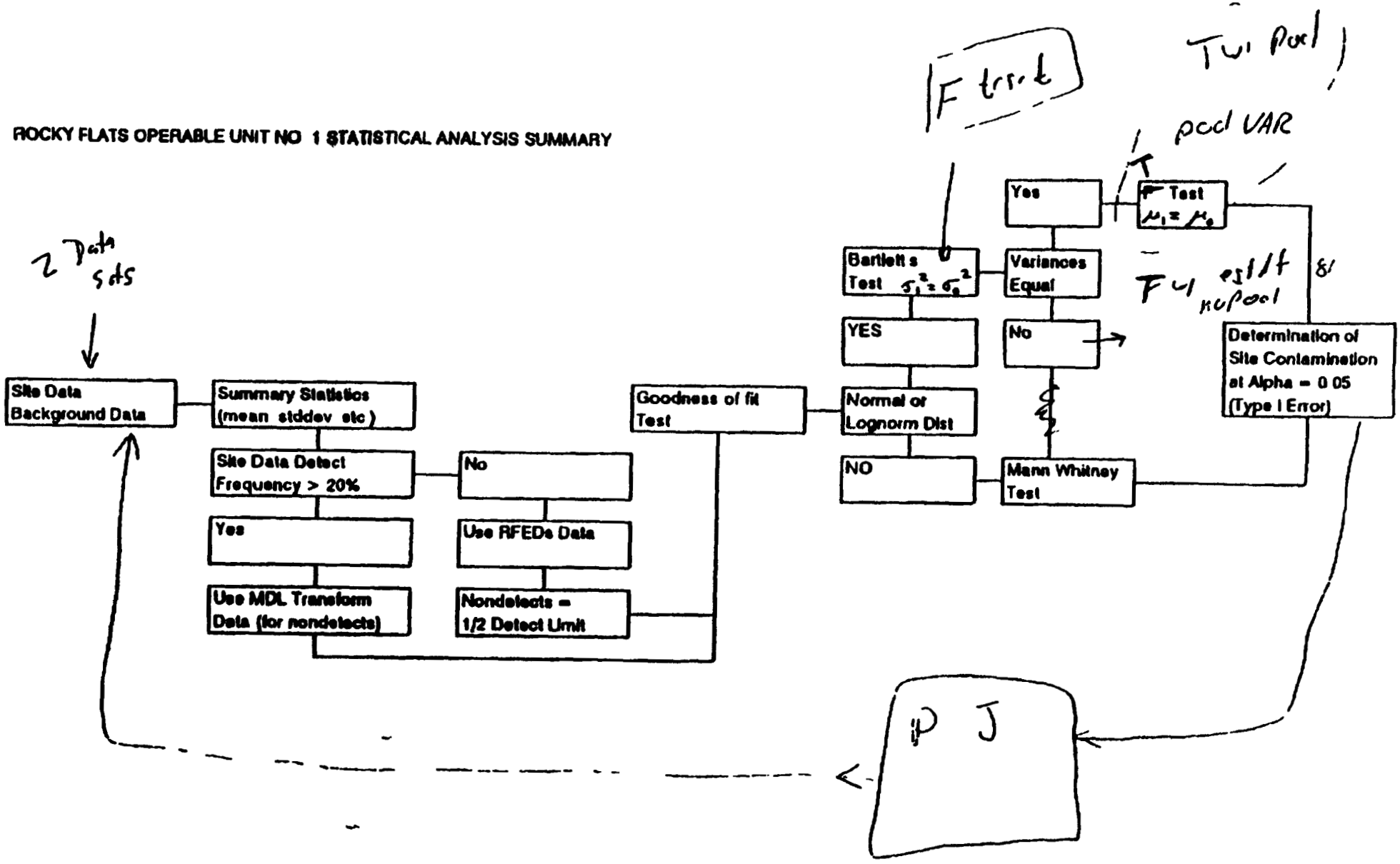
Case B Direct contact without consideration of availability

Case c Direct contact considering pump-dry and supplement

Figure F2 1 Protocol For Identification of Contaminants of Concern



ROCKY FLATS OPERABLE UNIT NO 1 STATISTICAL ANALYSIS SUMMARY



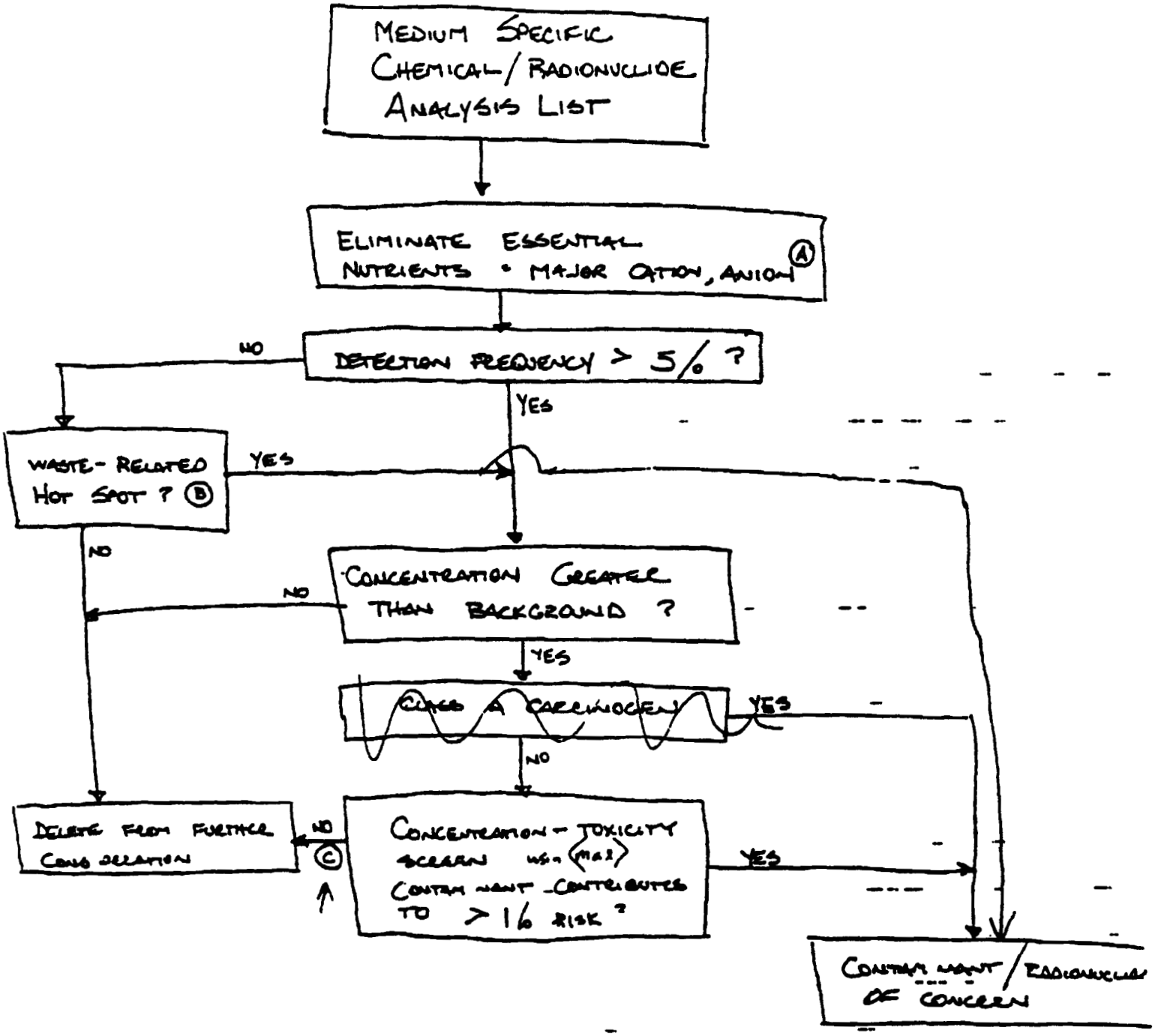
BUNNIE
LAVELLE

IDENTIFICATION OF COCs

(1) SUMMARIZE DATA BY ENVIRONMENTAL MEDIUM
THE MEDIA AND ANALYTES TO BE
CONSIDERED DEPEND ON THE LAND USE
SCENARIO

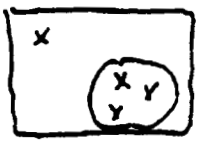
	RESIDENTIAL		COMM/ INDUSTRIAL	ECOLOGICAL RESERVE
	W/ GW INGESTION	W/O GW INGESTION		
SURFACE SOIL	X	X	X	X
SUBSURFACE SOIL	X	X (VOCs ONLY)	X (VOCs)	
GROUNDWATER	X - VOCs	X (VOCs ONLY)	X (VOCs)	
SURFACE WATER	X	X		X
SEDIMENT	X	X		X

(2) CONDUCT COC SCREEN SEPARATELY BY MEDIUM
SEE ATTACHED PROTOCOL



COC A, B, C } RA use 95 UCL

Treat HSpot separately → examine spatial of cluster use 95 UCL of cluster



NOTES

(A) STRICT ADHERENCE TO RAGS

(B) HOT SPOT SHOULD BE DEFINED BY MAXIMUM CONCENTRATION

$$CONC_{MAX} > PRG = HOT\ SPOT$$

NEXT STEP IS TO CONSIDER SPATIAL DISTRIBUTION need tables for each media (incl GW) to discuss hotspot issue

(C) CONTAMINANTS WILL BE COMPARED TO SINGLE PATHWAY PRG's CONTAMINANTS WITH CONCENTRATION > 01 PRG WILL BE COC

explain elimination of class A carcinogens in terms of toxicity screen concentration